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WHAT IS CLAIMED IS:

1. A vibratory transducer for a fluid flowing in a pipe, said transducer
5 comprising:

a flow tube vibrating in operation, for conducting the fluid, said flow tube
communicating with the pipe via an inlet-side tube section and an outlet-
side tube section, and said vibrating flow tube being, at least temporarily,
10 laterally displaced from an assigned static rest position as a result of
transverse impulses occurring in the transducer;

an excitation system for driving the flow tube;

15 a sensor system for sensing vibrations of the flow tube;

a first cantilever, fixed to an outlet end of the inlet-side tube section, for
causing bending moments which elastically deform the inlet-side tube
section; and

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a second cantilever, fixed to an inlet end of the outlet-side tube section, for
causing bending moments which elastically deform the outlet-side tube
section,

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said first cantilever having a centroid being located in the area of the inlet-
side tube section and said second cantilever having a centroid being located
in the area of the outlet-side tube section, and

said bending moments being such that in the deforming inlet-side tube
30 section and in the deforming outlet-side tube section impulses are produced

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which are directed opposite to the transverse impulses produced in the vibrating flow tube.

- 5 2. The vibratory transducer as claimed in claim 1, further comprising an antivibrator fixed to an inlet end and an outlet end of the flow tube.
- 10 3. The vibratory transducer as claimed in claim 1, further comprising a transducer case fixed to said inlet-side tube section and said outlet-side tube section.
- 15 4. A method for operating a vibratory transducer being connected to a fluid-conducting pipe, said transducer comprising:
- 20 a flow tube for conducting the fluid flowing in said pipe, said flow tube communicating with the pipe via an inlet-side tube section and an outlet-side tube section, and said flow tube having an assigned static rest position in which said flow tube, said inlet-side tube section and said outlet-side tube are essentially aligned with each other and with an imaginary longitudinal axis of the transducer,
- 25 an excitation system for driving the flow tube;
- 30 a sensor system for sensing vibrations of the flow tube; and
- a first cantilever fixed to an outlet end of said inlet-side tube section and a second cantilever fixed to an inlet end of said outlet-side tube section, said first cantilever having a centroid being located in the area of the inlet-side

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tube section and said second cantilever having a centroid being located in the area of the outlet-side tube section,

said method comprising the steps of:

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passing the fluid through said flow tube;

vibrating said flow tube; and

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detecting vibrations of said flow tube,

said method comprising the further steps of:

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causing displacement motions of said vibrating flow tube, said displacement motions displacing the flow tube laterally from said assigned static rest position such that said outlet end of the inlet-side tube section and said inlet end of the outlet-side tube section being spaced apart from said imaginary longitudinal axis;

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causing each of said first and second cantilevers to oscillate about its respective centroid for forcing twisting motions of said outlet end of the inlet-side tube section and said inlet end of the outlet-side tube section, and

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causing bending motions of at least parts of said inlet-side tube section and said outlet-side tube section, said bending motions are directed opposite to said displacement motions of said vibrating flow tube.

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5. The method as claimed in claim 4 further comprises the step of:

causing the antivibrator to oscillate out of phase with the flow tube.

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6. The method as claimed in claim 4 further comprises the step of:

causing the antivibrator to vibrate in an opposite phase to the flow tube.

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7. The method as claimed in claim 4 further comprises the step of:

driving the flow tube to vibrate with a vibration frequency lying in a range of natural resonance frequency.

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8. The method as claimed in claim 7 further comprises the step of:

driving the flow tube to vibrate with a frequency corresponding with a natural resonance frequency of a symmetrical eigenmode of the flow tube.

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